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## Allowable Subject Matter

The following is an examiner's statement of reasons for allowance:

The prior art of record of Scheib et al. is directed to an ultrasound system for determining an optimal cardiac cycle of a patient and performing vascular measurements. Scheib et al. specifically discloses that the ultrasound signal is processed using a Discrete Fast Fourier Transform. However, Scheib et al. does not teach or suggest the claimed subject matter related to representing the time-based. medical diagnostic signal as a piecewise series of function segments, wherein said time-based signal is an analog signal and said time-based information is digital timebased information, and said step of performing a transform involves accounting for a digitization error associated with a difference between said analog time-based signal and said digital time-based information, wherein said digital time-based information comprises a time series of digital values and said accounting involves defining a number of value ranges associated with said digital values, establishing a mathematical model defining a process for deriving said spectrum wherein a given digital value of said series of digital values is allowed to vary within one of said number of value ranges including said given digital value as part of said process, and using said mathematical model to derive said spectrum as now claimed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN F. RAMIREZ whose telephone number is (571)272-8685. The examiner can normally be reached on (Mon-Fri) 7:00 - 3:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian L. Casler can be reached on (571) 272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BRIAN CASLER/ Supervisory Patent Examiner, Art Unit 3737

/J. F. R./ Examiner, Art Unit 3737